

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L5	9	collaborative adj design	USPAT; EPO	2001/02/21 16:03			0
2	BRS	L6	2	fabricator adj selection	USPAT; EPO	2001/02/21 16:03			0
3	BRS	L8	0	fabricator near (data adj base)	USPAT; EPO	2001/02/21 16:05			0
4	BRS	L9	0	fabricator near2 (data adj base)	USPAT; EPO	2001/02/21 16:05			0
5	BRS	L10	0	fabricator same (data adj base)	USPAT; EPO	2001/02/21 16:06			0

	Document ID	Source	Issue Date	Pages	Title	Current OR	Retrieval Classif
1	US 5966310 A	USPAT	19991012	30	Personal design system and personal equipment production system for actually producing equipment having designed appearance	345/334	<i>US 5966310 A</i> <i>US 5966310 A</i> <i>US 5966310 A</i>
2	US 5956708 A	USPAT	19990921	26	Integration of link generation, cross-author user navigation, and reuse identification in authoring process	707/3	<i>US 5956708 A</i> <i>US 5956708 A</i> <i>US 5956708 A</i>
3	US 5940082 A	USPAT	19990817	24	System and method for distributed collaborative drawing	345/442	<i>US 5940082 A</i> <i>US 5940082 A</i> <i>US 5940082 A</i>
4	US 5905807 A	USPAT	19990518	29	Compression of geometric models using spanning trees	345/440	<i>US 5905807 A</i> <i>US 5905807 A</i> <i>US 5905807 A</i>
5	US 5825369 A	USPAT	19981020	30	Compression of simple geometric models using spanning trees	345/440	<i>US 5825369 A</i> <i>US 5825369 A</i> <i>US 5825369 A</i>
6	US 5784570 A	USPAT	19980721	9	Server for applying a recipient filter and compressing the input data stream based upon a set of at least one characteristics in a multiuser interactive virtual environment	709/247	<i>US 5784570 A</i> <i>US 5784570 A</i> <i>US 5784570 A</i>
7	US 5680530 A	USPAT	19971021	20	Graphical environment for interactively specifying a target system	345/440	<i>US 5680530 A</i> <i>US 5680530 A</i> <i>US 5680530 A</i>
8	US 5563988 A	USPAT	19961008	132	Method and system for facilitating wireless, full-body, real-time user interaction with a digitally represented visual environment	345/421	<i>US 5563988 A</i> <i>US 5563988 A</i> <i>US 5563988 A</i>
9	US 5541849 A	USPAT	19960730	46	Method and system for creating and validating low level description of electronic design from higher level, behavior-oriented description, including estimation and comparison of timing parameters	716/18	<i>US 5541849 A</i> <i>US 5541849 A</i> <i>US 5541849 A</i>

	Current XRef	Inventor	U	S	C	P	I
1	700/118 ; 700/97 ; 706/919	Maeda, Tsuyoshi , et al.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	707/100 ; 707/501 ; 707/511	Dyko, Denise Y. , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		Brinegar, David , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		Rossignac, Jarek Jaroslaw Roman , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		Rossignac, Jarek Jaroslaw Roman , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	341/51 ; 348/14.13 ; 348/402.1 ; 348/413.1 ; 382/107 ; 382/232 ; 709/200 ; 709/203 ; 709/235 ; 709/246	Funkhouser, Thomas A.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	345/335 ; 345/349	Selfridge, Peter Gilman , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	345/473	Maes, Pattie E. , et al.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	716/19 ; 716/5	Rostoker, Michael D. , et al.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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IS&R	L1	803	((("345/442") or ("345/440") or ("345/421"))).CCLS. <i>Handwritten: 4-nd</i>	USPAT; EPO	2001/02/22 08:51			0
IS&R	L2	2798	((("716/18") or ("701/1045") or ("707/500") or ("707/162") or ("703/13") or ("703/22") or ("703/1"))).CCLS.	USPAT; EPO	2001/02/22 08:55			0
BRS	L3	3585	1 or 2	USPAT; EPO	2001/02/22 08:55			0
BRS	L4	9	collaborative adj design	USPAT; EPO	2001/02/22 08:56			0
BRS	L5	608	(fabricator or manufacturer) near select\$3	USPAT; EPO	2001/02/22 08:57			0
BRS	L6	0	4 and 5	USPAT; EPO	2001/02/22 08:57			0
BRS	L7	617	4 or 5	USPAT; EPO	2001/02/22 08:57			0
BRS	L8	16	3 and 7	USPAT; EPO	2001/02/22 08:57			0

	Current XRef	Inventor	U	S	C	P	I
1	705/1 ; 705/26 ; 707/104	Green, H. Dean , et al.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	705/26 ; 705/27 ; 707/104 ; 707/3	Beall, Christopher Wade , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	705/26 ; 705/27	Ladner, Francis D. , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	707/102 ; 707/3 ; 707/4	Cochran, Nancy Pauline	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	707/103	Sandifer, Michael A.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		Brinegar, David , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		Rossignac, Jarek Jaroslaw Roman , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		Ladner, Francis D. , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		Rossignac, Jarek Jaroslaw Roman , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	701/29 ; 701/30 ; 707/103	Sandifer, Michael A.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	707/1 ; 707/10 ; 707/100 ; 707/102 ; 707/3 ; 707/4 ; 709/206	Cochran, Nancy Pauline	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Document ID	Source	Issue Date	Pages	Title	Current OR	Retrieval Classif
12	US 5727164 A	USPAT	19980310	33	Apparatus for and method of managing the availability of items	705/28	
13	US 5680530 A	USPAT	19971021	20	Graphical environment for interactively specifying a target system	345/440	
14	US 5563988 A	USPAT	19961008	132	Method and system for facilitating wireless, full-body, real-time user interaction with a digitally represented visual environment	345/421	
15	US 5541849 A	USPAT	19960730	46	Method and system for creating and validating low level description of electronic design from higher level, behavior-oriented description, including estimation and comparison of parameters of estimated machinery	716/18	cellular not Doc
16	US 5504687 A	USPAT	19960402	17	Apparatus for and method of managing the availability of items	700/95	comp. selection

	Current XRef	Inventor	U	S	C	P	I
12	705/29 ; 707/104	Kaye, Eugene G. , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	345/335 ; 345/349	Selfridge, Peter Gilman , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	345/473	Maes, Pattie E. , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	716/19 ; 716/5	Rostoker, Michael D. , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	703/1	Wolf, Mike	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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1	IS&R	2	("5724508").PN.	USPAT; EPO	2001/02/21 15:40
2	IS&R	2	("5293619").PN.	USPAT; EPO	2000/11/09 10:33
3	BRS	1	vendor same rfp	USPAT; EPO	2000/11/09 10:35
4	BRS	699	vendor's same (rfp or request for proposal)	USPAT; EPO	2000/11/09 10:36
5	BRS	233231	network	USPAT; EPO	2000/11/09 10:36
6	BRS	200	(vendor's same (rfp or request for proposal))	USPAT; EPO	2000/11/09 10:37
7	BRS	7672	same network	USPAT; EPO	2000/11/09 10:37
8	BRS	4	((vendor's same (rfp or request for proposal)) same network) and cad	USPAT; EPO	2000/11/09 10:37

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input type="checkbox"/>	<input type="checkbox"/>	US 5452239 A	19950919	131	Method of removing gated clocks from the clock nets of a netlist for timing sensitive implementation of the netlist in a hardware emulation	703/19
2	<input type="checkbox"/>	<input type="checkbox"/>	US 5586254 A	19961217	119	System for managing and operating a network by physically imaging the network	714/25
3	<input type="checkbox"/>	<input type="checkbox"/>	US 5999908 A	19991207	91	Customer-based product design module	705/1
4	<input type="checkbox"/>	<input type="checkbox"/>	US 6134557 A	20001017	11	Materials and supplies ordering system	707/102

customer based catalog

	Current XRef	Retrieval Classif	Inventor	S	C	P
1	714/725 ; 716/17		Dai, Wei-Jin , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	340/825.03 ; 707/104 ; 709/223 ; 714/43		Kondo, Mariko , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	434/118 ; 705/10 ; 705/7		Abelow, Daniel H.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	707/104		Freeman, Craig	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

09/239256

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L6 ANSWER 1 OF 2 PROMT COPYRIGHT 2000 Gale Group

AN 2000:161537 PROMT

TI Tools for Web Collaboration.(Technology Information)

AU Kempfer, Lisa

SO Computer-Aided Engineering, (April 1999) Vol. 18, No. 4, pp. 38.
ISSN: 0733-3536.

PB Penton Media, Inc.

DT Newsletter

LA English

WC 3133

TX The ability to access and collaborate on design data--the heart of mechanical engineering environments--any where, any time is key to successful product launches. Ubiquitous access to data allows engineers

to reduce product development cycles, improve quality, and achieve the powerful position of being first to market.

A variety of new, Web-based engineering tools are making close collaboration and reduced product cycle times a reality. By maximizing

Web and Java technology, this class of software enables users to easily and intuitively access and collaborate on design data.

Larger companies are leading the charge, says Kelley Perey, director of Technical Markets at Sun Microsystems. Sun is the developer of Java, the open programming language that is the backbone of many Web browsers and software designed to be used over the Web.

"Design complexity and large data sets are going to drive companies to use Web-based applications," Perey predicts. "They are going to have no other choice." The use of Web-based tools is widening. Perey says she

sees a "trickle-down" effect--suppliers of large companies are starting to use Web tools to communicate with the big firms they support as well as other engineers and suppliers.

Since there is a spectrum of users, there is also a variety of Web collaboration software on the market. Each one offers different types of functions for different types of applications. Several years ago, product data management (PDM) vendors introduced the Web to engineers by adding Webfront ends to their products, making them much easier to use. Finally, aided by the Web, PDM information was being delivered in a format that each different class of user was able to understand.

Now, there are packages focused on delivering CAD/design data in a similar usable fashion to all the members of a product development team. This software seems to fall into a few broad categories: design development collaboration, CAD collaboration, visualization, and project management.

Design Collaboration

One of the big **ling blocks with collaborati** the Web with 3D
is bandwidth. CAD files are too big and the bandwidth too small to
allow solid models to flow rapidly across **networks**. A few
companies, including Adaptive Media and RealityWave, are hoping to solve
that problem through large-model streaming technology.

Deven Kalra, chief technology officer at Adaptive Media, explains,
"Rather than trying to create faster and faster rendering engines ..., a
smarter approach is to reduce the data that is given to the rendering
engines." His company has done this with its Envision 3D product.

Envision 3D enables the distribution of highly complex 3D model design
across networks by employing object simplification and real-time culling
technologies. Object simplification changes an object's representation
into one with fewer data points, while meeting the user's need for a
particular level of detail. This results in faster rendering and speedier
network transfers, at the expense of geometric or visual precision.
Real-time culling determines which parts or objects must be rendered for
the current view, so that unseen portions are not even submitted to the
rendering facility.

These technologies allow users to easily visualize large models over an
extended enterprise on minimally equipped PCs. Using Envision 3D's
dimensioning capability, assemblies and parts can be checked for
interference or collision. Dimensioning and measurement of edges, faces,
arcs, points, objects, and assemblies are supported. Models can also be
annotated and marked up.

"Our design teams are in many locations around the world and we needed
an application that would allow us to collaborate in a timely and
productive manner," says Bill Olmsted, manager of Computer Integrated
Engineering at Jacobs Engineering. "After looking at other alternatives

on the market, we found that Envision 3D was the only solution that offered
the performance and scalability we required, enabling our teams to
cost-effectively take delays out of the design process. Reduced delays
improves the bottom line for both us and our clients."

RealityWave's Concept module also uses streaming technology to allow a
CAD designer and one or more customers using standard office PCs to view
the same 3D CAD model on their computers while they discuss the model

over the telephone. Any change the designer makes to the model during the
discussion is transmitted in real time to the other collaborators.

By using RealityWave Concept, Fabri-Kal, a plastic packaging
thermoformer, expects to reduce the time to design rigid-plastic
containers for a major food supplier from four weeks to hours.

Collaborating in real time, engineer to engineer, over the Web is now
possible using OneSpace from CoCreate Software. It is a CAD independent
software that allows participants in a collaborative session to make
changes to a model. Fisher Controls International Inc., a manufacturer of
regulators and valves, is using OneSpace for real-time collaboration
between its Marshalltown, IA facility and its European design center. The
European design center is responsible for localizing U.S. designs for
manufacture in Europe using regional suppliers. Use of the software is
already reducing its cycle times. Fisher Controls cites an example of
where a job that normally would have taken a week to complete through
E-mail or normal mail was completed in two collaboration sessions of 15
min each.

"Because everyone is working off the same model," explains Robert

Christenson, the project lead FCS Technology from Sher Controls, "we are able to avoid costly design mistakes and to promote better communication across our distributed design groups as well as realize significant cost savings through reduced travel expenses. The very first time one of our analysts used the software, he was able to accomplish in a 15- to 20-min session what we had not been able to accomplish in three weeks."

CoCreate reports OneSpace has been used for detecting collisions, aesthetic considerations, catching major interpretive errors, and supply chain collaboration. OneSpace 3.0 has a client/server architecture, and on-line sessions can be started by dragging and dropping file names from the browser into the application window.

Sometimes, pictures don't tell the whole story about what needs to be reviewed or changed on a solid model. To improve communication among individuals and project teams, InfoCast LLC offers eTEAM 1.0. It is software that captures voice, images, and text.

Engineers can capture CAD files and vocally record their comments about the images. Any file related to the issue can be attached as the user speaks. The result is a personalized message with synchronized images, markups, and voice that can be sent to team members. The receiving party can reply to the original message with his own images, markups, and voice.

"For engineers working in project teams spread across the country, eTEAM provides a viable technology to aid us in our communication about complex design problems," says Kim Kelley, director of Customer Support Operations at Mentor Graphics, a leading provider of electronic design software. "Imagine trying to describe to a customer over the phone which component is failing in a 100M transistor design; it's time consuming and our customers don't have time to spare. In electronic design, markets are won or lost in days. The eTEAM capability of capturing design images and annotating where an exact problem occurs represents huge time savings."

Another tool available for collaboration anywhere, anytime is ReviewIt from Cubus Corp. The software is said to directly integrate visuals, graphics, and their associated annotations with user message discussion. The ReviewIt work screen allows users to mark up a drawing and discuss design intent on a single screen.

Zaitrarrio Collier, director of engineering at Cubus, says two patented technologies are at the core of the software. "When you are in ReviewIt's design and review environment, you will see a drawing or image on the left and a place to leave a message or discussion on the right. Both of these appear on a single screen." Together, he explains, the patented technologies of context preservation and graphical indexing allow users to highlight an area of the drawing with annotation tools and directly associate that annotation and view of the drawing with a personal message.

Visualization Collaboration

It simply takes less time to explain something to someone if you show them a picture or better yet, an animation. Immersive Design knows this. Its mission is enterprise-wide product communication. Its Interactive Product Animator (IPA) 5.0, a mechanical visualization and animation package, addresses the need to share information across product design,

development, creation, marketing, finance, sales, service. Currently, IPA can be used to animate solid models created in Parametric Technology Corp.'s Pro/ENGINEER, Unigraphics Solutions' Solid Edge, SDRC's I-DEAS Master Series, and SolidWorks Corp.'s SolidWorks, among others.

Electroglas Inc., a manufacturer of wafer-probing solutions, starting using IPA in 1996 in an effort to improve design efficiency and communication. IPA translates Electroglas' complex prober engine designs into Microsoft Windows Audio Video Interleaved (AVI) files that can be viewed from any desktop PC, enhancing both cross-department communication and the input review process. These AVI files are then sent via E-mail to anyone who needs input on the design process.

"In our review meeting," says Michael Brennan, a designer/ drafter at Electroglas, "we're able to lead the different departments through the designs in 3D with rotating animation. We've cut hours out of our review meetings while making them more fluid and informative for all involved. The AVI allows the entire team to participate in the design process."

IPA animations are said to be easy to create. Mike Dolan, president of the design firm, Choice Designs Inc. is a user and reseller of IPA. He says renderings are "quick and easy to create." To get started, the learning curve is a matter of hours. However, Dolan adds, it may take two to three weeks to produce high-quality, photorealistic output with the higher-end version of the software.

The animations created allow users to see the design from 360 degrees and shows how different pieces of the design assemble, interact, and function. The translucent option can be used to reveal internal components

in order to study functionality and determine accuracy. Another area IPA is useful for, Dolan says, is animating parts and assemblies inside of PDM software. "PDM is a boring tool," he says. "People use PDM mainly because they want to be ISO compliant. IPA takes some of the 'must do' out of PDM." The software, he explains, improves the communication of PDM data in that it can show the form, fit, and function of parts and assemblies.

Established mechanical CAD visualization software companies like Engineering Animation Inc. (EAI) provide Web functionality for collaborative work.

EAI says its VisView Web is a viewing tool that provides users with the ability to access almost any type of drawings or documents through the Internet or a company's intranet. Some of its highlights include the ability to view more than 20 standard file formats; a right-mouse pop-up or the keyboard can be used to control view actions; pages can be rotated in 90-degree increments; and there are Java applets for rotate, mirror, and focus. In addition, users can maneuver through multiple-page TIFF, HP-GL, and other files page by page, or first, last, or next page.

Managing Projects

Project management is essential to successful product development. There needs to be software that tracks who is doing what and when and is it finished yet? Project management software that is accessible over the Web is becoming an essential tool for many companies.

There is a growing trend toward virtual design and engineering firms in cyberspace. These firms need Web-based project management tools. Just ask Mark Wheeler, president of Tri-Cycle Product Design, a three-person industrial design and mechanical engineering company. The company focuses on design projects in the solar and semiconductor process machinery,

semiconductor, for the design, and high-tech computer product industries. The company depends on subcontractors

Recognizing that a project Web site was the best way to manage its projects, but not having the time or resources to create its own site, Tri-Cycle turned to Aspects Sitebuilder software from Framework Technologies Corp.

"Our clients know we work on a managed-subcontractor basis, with Tri-Cycle Product Design assuming all product development management responsibility. Considering many of the folks we work with also work full-time jobs elsewhere, we can effectively put in up to five man-weeks per week on projects using ActiveProject Web Sites.

Web sites built with ActiveProject tools allow users to sign out and work on a project while at the same time clients can view the files on a read-only basis.

ActiveProject 4.0 users can perform design reviews directly using the software's integrated commenting and on-line review features. Information published to an ActiveProject Web site, its publication history, and any associated comments are automatically managed and maintained by the system. Users can mark up drawings using their Web browsers, and save these markups to the project site. The software automatically manages the relationship between any markup comments and the version of the drawing/document they were made against.

Users can request information directly from other project participants, while maintaining a complete record of both requests and responses. A complete log and archive of all information requests are maintained automatically via the company's project Web site.

A new rising star in the field of Web-based product/project team collaborative software companies is NexPrise Inc., a spin-off of Lockheed Martin. It offers its ipTeam 2.0 Suite, which provides development teams with a dedicated, secure Internet-based project area hosting all aspects of a team's activity. It facilitates the capture, organization, and dissemination of product development information, including documents, messages, design rationale, multimedia objects, supplier knowledge, and events. The Suite also provides team administration tools, message handling and multilevel security protection.

A highlight of the ipTeam Suite is an Internet Notebook, an electronic engineering notebook. It captures free-form drawing, audio, text, and snapshots of CAD drawings. The Notebook is also able to link objects, images, documents, and Web sites into cohesive material for the team. The information captured in the Notebook is accessible through a sophisticated search capability as well as publish and subscribe tools for managing the dissemination of the information.

The Suite includes the ipTeam Internet Workbench, a general project-centric framework; the Document Vault, a document management system; the Tracking Center, a module for tracking the progress of the team against milestones and interdependencies; the Procurement Center, a request for procurement (RFP) negotiation module; and the Supplier Center, a Java-based module for capturing and organizing knowledge on preferred suppliers.

CAE LINKS

Adaptive Media -- www.adaptivemedia.com
RealityWave -- www.realitywave.com
CoCreate -- www.cocreate.com

InfoCast -- www.inet.net
Cubus -- www.cul.net
Immersive Design -- www.immdesign.com
Choice Designs -- www.ezchoice.com
EAI -- www.eai.com
Framework -- www.frametech.com
NexPrise -- www.nexprise.com

PDM on the Web

According to Ed Miller, president of CIMdata Inc., a consulting firm specializing in PDM and CAD/CAM, "Web technology has had a rapid, major impact on PDM and continues to exert a tremendous influence on the way systems are developed and implemented." In fact, he explains, many user companies have internally developed Web connections for their PDM systems and are pressuring vendors for increased capabilities.

Miller says all major PDM vendors feel this demand and have created focused programs to include browser technology in their products. "Some vendors have already extended their capabilities beyond the initial one-way, view-only interfaces and have developed impressive new Web-enabled user interfaces that provide access to full system functionality. Work is also underway on capabilities for hooking PDM browsers into the Internet to access on-line commercial databases and also enable dispersed users to easily share information."

For instance, Structural Dynamics Research Corp.'s (SDRC's) e!Vista product is a Java-based front end to the Metaphase Enterprise PDM system. It allows companies to gather, manage, and share information via the Internet. With e!Vista, all of the PDM functionality of Metaphase Enterprise can be customized and delivered to any user equipped with a Web browser.

Parametric Technology Corp.'s (PTC's) Windchill PDM supports managing and communicating information about product structures and changes throughout product life cycles. This software was entirely written in Java on both the client and server side. Windchill PDM appears as Web pages within a commercial Web browser that provides access to Java applets, search engines, universal resource locators (URLs), E-mail integration, upload/download servers, integration with plug-in and helper applications, and the ability to hyperlink and navigate information across supplier and partner databases.

A Web tool in the document management arena is Intranet Docs from Xerox Engineering Systems. Intranet Docs provides enterprise-wide access to thousands of documents loaded on an Intranet Docs server. Using a standard

Web browser and network access, engineers can quickly search for and view engineering and large-format documents--at any time, location, and on any computer platform. Users can build and distribute document sets and send ViewMark URL document links instead of file attachments. A revision control feature lets viewers know there is an updated version of the document. A red X is displayed on the document that can be clicked to bring up the updated document.

CAE LINKS

CIMdata -- www.CIMdata.com
SDRC -- www.sdrc.com
PTC -- www.windchill.com
Xerox -- www.xerox.com

CAD vendors are also starting to integrate standard Web technology into their design and drafting software. Dassault Systemes started a few years ago with its CATIA Network Computing Solutions (CATweb) module.

Phil Harrison, design manager at Standard Motor Products, a CATIA user, says his company's use of Dassault Version 2.1 has made its CATIA data more usable. "CATweb has allowed us to open up access to our CATIA data to manufacturing locations, purchasing, and suppliers," he explains. "Response time is such that users often do not realize that the data they are viewing is not located on their own workstation."

Dassault says its new CATweb Navigator Version 2 Release 2 offers high-speed and low-cost Web navigation tools to explore native engineering data over the Web. It can access configured product structured data from Enovia's ENOVIAVPM PDM system. It allows downloading of multiple 3D models and 2D drawings on the client machine, while providing new annotation capabilities. Using CATweb Space and CATweb Publish, the user also benefits from new functions for advanced measurement and analysis on exact geometry, section cut (with immediate 2D visualization) and Web site publication.

The Web is also infiltrating low-cost CAD. IMSI's recently released TurboCAD 6 offers a new Internet Palette. This capability is based on new Front Line (or Impression Layer) technology created by IMSI which integrates Web browsing into software applications. It connects users to IMSI's TurboCAD.com Web site via the Internet every time the application is opened--providing users with CAD-related content, upgrades, technical assistance, file hosting, and access to other on-line users and sites.

CAE LINKS

Dassault -- www.dsweb.com
Enovia-- www.enovia.com
IMSI -- www.imsisoft.com

Lisa Kempfer is Associate Editor of Computer-Aided ENGINEERING.3

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CT *PC7372431 CAD/CAM/CIM/CAE Software; PC3573036 CAD/CAM/CIM Computer Systems
CC *EC310 Science & research
ICL *BUSN Any type of business; CMPT Computers and Office Automation
NAIC *51121 Software Publishers; 334111 Electronic Computer Manufacturing
GT *CC1USA United States

=> d his

(FILE 'HOME' ENTERED AT 13:24:59 ON 07 NOV 2000)

FILE '1MOBILITY, 2MOBILITY, AEROSPACE, APILIT, APIPAT, BIOTECHNO, CEN, CIN, COMPENDEX, CONFSCI, DKF, DKILIT, ELCOM, ENERGY, ENTEC, EUROPATFULL, GEOREF, HEALSAFE, IFIPAT, INSPEC, INSPHYS, ISMEC, ITRD, JICST-EPLUS,

MDF,

ENTER DISPLAY FORMAT (IBIB):all

L6 ANSWER 1 OF 2 PROMT COPYRIGHT 2000 Gale Group

AN 2000:161537 PROMT

TI Tools for Web Collaboration.(Technology Information)

AU Kempfer, Lisa

SO Computer-Aided Engineering, (April 1999) Vol. 18, No. 4, pp. 38.
ISSN: 0733-3536.

PB Penton Media, Inc.

DT Newsletter

LA English

WC 3133

TX The ability to access and collaborate on design data--the heart of
mechanical engineering environments--any where, any time is key to
successful product launches. Ubiquitous access to data allows engineers

to reduce product development cycles, improve quality, and achieve the
powerful position of being first to market.

A variety of new, Web-based engineering tools are making close
collaboration and reduced product cycle times a reality. By maximizing

Web and Java technology, this class of software enables users to easily and
intuitively access and collaborate on design data.

Larger companies are leading the charge, says Kelley Perey, director of
Technical Markets at Sun Microsystems. Sun is the developer of Java, the
open programming language that is the backbone of many Web browsers and
software designed to be used over the Web.

"Design complexity and large data sets are going to drive companies to
use Web-based applications," Perey predicts. "They are going to have no
other choice." The use of Web-based tools is widening. Perey says she

sees a "trickle-down" effect--suppliers of large companies are starting to use
Web tools to communicate with the big firms they support as well as other
engineers and suppliers.

Since there is a spectrum of users, there is also a variety of Web
collaboration software on the market. Each one offers different types of
functions for different types of applications. Several years ago, product
data management (PDM) vendors introduced the Web to engineers by
adding Webfront ends to their products, making them much easier to use.
Finally, aided by the Web, PDM information was being delivered
in a format that each different class of user was able to understand.

Now, there are packages focused on delivering CAD/design data in a
similar usable fashion to all the members of a product development team.
This software seems to fall into a few broad categories: design
development collaboration, CAD collaboration, visualization, and project
management.

Design Collaboration

Christenson, the project lead FCS Technology for Sher Controls, "we are able to avoid costly design mistakes and to promote better communication across our distributed design groups as well as realize significant cost savings through reduced travel expenses. The

very

first time one of our analysts used the software, he was able to accomplish in a 15- to 20-min session what we had not been able to accomplish in three weeks."

CoCreate reports OneSpace has been used for detecting collisions, aesthetic considerations, catching major interpretive errors, and supply chain collaboration. OneSpace 3.0 has a client/server architecture, and on-line sessions can be started by dragging and dropping file names from the browser into the application window.

Sometimes, pictures don't tell the whole story about what needs to be reviewed or changed on a solid model. To improve communication among individuals and project teams, InfoCast LLC offers eTEAM 1.0. It is software that captures voice, images, and text.

Engineers can capture CAD files and vocally record their comments about the images. Any file related to the issue can be attached as the user speaks. The result is a personalized message with synchronized images, markups, and voice that can be sent to team members. The receiving party can reply to the original message with his own images, markups, and voice.

"For engineers working in project teams spread across the country, eTEAM provides a viable technology to aid us in our communication about complex design problems," says Kim Kelley, director of Customer Support Operations at Mentor Graphics, a leading provider of electronic design software.

"Imagine trying to describe to a customer over the phone which component is failing in a 100M transistor design; it's time consuming and our customers don't have time to spare. In electronic design, markets are won or lost in days. The eTEAM capability of capturing design images and annotating where an exact problem occurs represents huge time savings."

Another tool available for collaboration anywhere, anytime is ReviewIt from Cubus Corp. The software is said to directly integrate visuals, graphics, and their associated annotations with user message discussion. The ReviewIt work screen allows users to mark up a drawing and discuss design intent on a single screen.

Zaitrarrio Collier, director of engineering at Cubus, says two patented technologies are at the core of the software. "When you are in ReviewIt's design and review environment, you will see a drawing or image on the left and a place to leave a message or discussion on the right. Both of these appear on a single screen." Together, he explains, the patented technologies of context preservation and graphical indexing allow users to highlight an area of the drawing with annotation tools and directly associate that annotation and view of the drawing with a personal message.

Visualization Collaboration

It simply takes less time to explain something to someone if you show them a picture or better yet, an animation. Immersive Design knows this. Its mission is enterprise-wide product communication. Its Interactive Product Animator (IPA) 5.0, a mechanical visualization and animation package, addresses the need to share information across product design,

semiconductor, f re design, and high-tech cor product industries. The pany depends on subcontractors

Recognizing that a project Web site was the best way to manage its projects, but not having the time or resources to create its own site, Tri-Cycle turned to Aspects Sitebuilder software from Framework Technologies Corp.

"Our clients know we work on a managed-subcontractor basis, with Tri-Cycle Product Design assuming all product development management responsibility. Considering many of the folks we work with also work full-time jobs elsewhere, we can effectively put in up to five man-weeks per week on projects using ActiveProject Web Sites.

Web sites built with ActiveProject tools allow users to sign out and work on a project while at the same time clients can view the files on a read-only basis.

ActiveProject 4.0 users can perform design reviews directly using the software's integrated commenting and on-line review features. Information published to an ActiveProject Web site, its publication history, and any associated comments are automatically managed and maintained by the system. Users can mark up drawings using their Web browsers, and save these markups to the project site. The software automatically manages the relationship between any markup comments and the version of the drawing/document they were made against.

Users can request information directly from other project participants, while maintaining a complete record of both requests and responses. A complete log and archive of all information requests are maintained automatically via the company's project Web site.

A new rising star in the field of Web-based product/project team collaborative software companies is NexPrise Inc., a spin-off of Lockheed Martin. It offers its ipTeam 2.0 Suite, which provides development teams with a dedicated, secure Internet-based project area hosting all aspects of a team's activity. It facilitates the capture, organization, and dissemination of product development information, including documents, messages, design rationale, multimedia objects, supplier knowledge, and events. The Suite also provides team administration tools, message handling and multilevel security protection.

A highlight of the ipTeam Suite is an Internet Notebook, an electronic engineering notebook. It captures free-form drawing, audio, text, and snapshots of CAD drawings. The Notebook is also able to link objects, images, documents, and Web sites into cohesive material for the team. The information captured in the Notebook is accessible through a sophisticated search capability as well as publish and subscribe tools for managing the dissemination of the information.

The Suite includes the ipTeam Internet Workbench, a general project-centric framework; the Document Vault, a document management system; the Tracking Center, a module for tracking the progress of the team against milestones and interdependencies; the Procurement Center, a request for procurement (RFP) negotiation module; and the Supplier Center, a Java-based module for capturing and organizing knowledge on preferred suppliers.

CAE LINKS

Adaptive Media -- www.adaptivemedia.com
RealityWave -- www.realitywave.com
CoCreate -- www.cocreate.com

CAD vendors are also starting to integrate standard Web technology into their design and drafting software. Dassault Systemes started a few years ago with its CATIA Network Computing Solutions (CATweb) module.

Phil Harrison, design manager at Standard Motor Products, a CATIA user, says his company's use of Dassault Version 2.1 has made its CATIA data more usable. "CATweb has allowed us to open up access to our CATIA data to manufacturing locations, purchasing, and suppliers," he explains. "Response time is such that users often do not realize that the data they are viewing is not located on their own workstation."

Dassault says its new CATweb Navigator Version 2 Release 2 offers high-speed and low-cost Web navigation tools to explore native engineering data over the Web. It can access configured product structured data from Enovia's ENOVIAVPM PDM system. It allows downloading of multiple 3D models and 2D drawings on the client machine, while providing new annotation capabilities. Using CATweb Space and CATweb Publish, the user also benefits from new functions for advanced measurement and analysis on exact geometry, section cut (with immediate 2D visualization) and Web site publication.

The Web is also infiltrating low-cost CAD. IMSI's recently released TurboCAD 6 offers a new Internet Palette. This capability is based on new Front Line (or Impression Layer) technology created by IMSI which integrates Web browsing into software applications. It connects users to IMSI's TurboCAD. com Web site via the Internet every time the application is opened--providing users with CAD-related content, upgrades, technical assistance, file hosting, and access to other on-line users and sites.

CAE LINKS

Dassault -- www.dsweb.com
Enovia-- www.enovia.com
IMSI -- www.imsisoft.com

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CT *PC7372431 CAD/CAM/CIM/CAE Software; PC3573036 CAD/CAM/CIM Computer Systems
CC *EC310 Science & research
ICL *BUSN Any type of business; CMPT Computers and Office Automation
NAIC *51121 Software Publishers; 334111 Electronic Computer Manufacturing
GT *CC1USA United States

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FILE '1MOBILITY, 2MOBILITY, AEROSPACE, APILIT, APIPAT, BIOTECHNO, CEN, CIN, COMPENDEX, CONFSCI, DKF, DKILIT, ELCOM, ENERGY, ENTEC, EUROPATFULL, GEOREF, HEALSAFE, IFIPAT, INSPEC, INSPHYS, ISMEC, ITRD, JICST-EPLUS,

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EPO Abstracts Database
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USPT,JPAB,EPAB,DWPI,TDBD	cad	15195	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	pdm	2113	<u>L2</u>
USPT,JPAB,EPAB,DWPI,TDBD	niccad	0	<u>L1</u>

WEST

Generate Collection

Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 6139833 A

L4: Entry 1 of 6

File: USPT

Oct 31, 2000

US-PAT-NO: 6139833

DOCUMENT-IDENTIFIER: US 6139833 A

TITLE: Targeted gene discovery

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6039897 A

L4: Entry 2 of 6

File: USPT

Mar 21, 2000

US-PAT-NO: 6039897

DOCUMENT-IDENTIFIER: US 6039897 A

TITLE: Multiple patterned structures on a single substrate fabricated by elastomeric micro-molding techniques

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 5272641 A

L4: Entry 3 of 6

File: USPT

Dec 21, 1993

US-PAT-NO: 5272641

DOCUMENT-IDENTIFIER: US 5272641 A

TITLE: Parts insertion machine control system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 4. Document ID: JP 2000113007 A

L4: Entry 4 of 6

File: JPAB

Apr 21, 2000

PUB-NO: JP02000113007A

DOCUMENT-IDENTIFIER: JP 2000113007 A

TITLE: SYSTEM AND METHOD FOR LINKING CAD/PDM AND COMPUTER- READABLE RECORDING MEDIUM RECORDING CAD/PDM LINKING PROGRAM

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 5. Document ID: JP 11191095 A

L4: Entry 5 of 6

File: JPAB

Jul 13, 1999

PUB-NO: JP411191095A

DOCUMENT-IDENTIFIER: JP 11191095 A

TITLE: INTEGRATED CAE SYSTEM

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Clip Img	Image
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☐ 6. Document ID: JP 2000113007 A

L4: Entry 6 of 6

File: DWPI

Apr 21, 2000

DERWENT-ACC-NO: 2000-354964

DERWENT-WEEK: 200031

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TITLE: CAD and PDM cooperation system, has CAD data registration unit to store different data format of CAD data into PDM system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Clip Img	Image
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Terms	Documents
12 same 13	6

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10

Documents, starting with Document: 6

Display Format:

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Change Format

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L1: Entry 4 of 6

File: JPAB

Apr 21, 2000

PUB-NO: JP02000113007A

DOCUMENT-IDENTIFIER: JP 2000113007 A

TITLE: SYSTEM AND METHOD FOR LINKING CAD/PDM AND COMPUTER- READABLE RECORDING
MEDIUM RECORDING CAD/PDM LINKING PROGRAM

PUBN-DATE: April 21, 2000

INVENTOR-INFORMATION:

NAME

MURAKAMI, YOSHIO

COUNTRY

N/A

ASSIGNEE-INFORMATION:

NAME

TOSHIBA CORP

COUNTRY

N/A

APPL-NO: JP10277623

APPL-DATE: September 30, 1998

INT-CL (IPC): G06F 17/50

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a CAD/PDM linking system capable of providing a concurrent engineering by linking plural kinds of CAD systems and PDM system.

SOLUTION: This CAD/PDM linking system is provided with plural kinds of CAD systems 11-1n, local disks 21-2n belonging to the respective CAD systems, PDM system 3, data base (D/B) 4 belonging to the PDM system 3, CAD/PDM interface part 5 for controlling the exchange of data between the CAD system and PDM system, disk 6 for I/F belonging to the CAD/PDM interface part 5, model registration request table 7, object model managing table 8 and attached information transforming table 9. The model data or configuration tree information of plural kinds of CAD systems 11-1n in different data formats are transformed to the data format of the PDM system 3 and registered in the PDM system 3 so that the PDM system 3 can totally manage plural kinds of CAD system 11-1n.

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L1: Entry 5 of 6

File: JPAB

Jul 13, 1999

PUB-NO: JP411191095A
DOCUMENT-IDENTIFIER: JP 11191095 A
TITLE: INTEGRATED CAE SYSTEM

PUBN-DATE: July 13, 1999

INVENTOR-INFORMATION:

NAME

SHIYOUI, SHINICHI
YAGAWA, MOTOKI
YOSHIMURA, SHINOBU
AKIBA, HIROSHI

COUNTRY

N/A
N/A
N/A
N/A

INT-CL (IPC): G06F 15/16

ABSTRACT:

PROBLEM TO BE SOLVED: To enable integration of CAD and CAM and expansion to PDM (product data management) by making abstract CAE (computer-aged engineering) system software concepts in decentralized environment and making a communication between subsystems by message passing using TCP/IP as the standard protocol of a communication between computers.

SOLUTION: The whole system including a CAD and a CAM system is generally named 'universe' and the CAD and CAE systems in it are named 'one galactic system'. Galactic systems A to D consists of several 'galaxys' (1) to (4). Communication in and between the galaxys and between the galactic systems are performed by the message passing of TCP/IP sockets.

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L1: Entry 6 of 6

File: DWPI

Apr 21, 2000

DERWENT-ACC-NO: 2000-354964

DERWENT-WEEK: 200031

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TITLE: CAD and PDM cooperation system, has CAD data registration unit to store different data format of CAD data into PDM system

PATENT-ASSIGNEE:

ASSIGNEE

CODE

TOSHIBA KK

TOKE

PRIORITY-DATA:

1998JP-0277623

September 30, 1998

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2000113007	April 21, 2000	N/A	008	G06F017/50 A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-NO
JP2000113007A	September 30, 1998	1998JP-0277623	N/A

INT-CL (IPC): G06F 17/50

ABSTRACTED-PUB-NO: JP2000113007A

BASIC-ABSTRACT:

NOVELTY - A model data and a component tree information corresponding to different data format are converted into a respective data format of PDM system on the same are stored in PDM system.

USE - For control and designing applications in electrical machinery manufacturing facility.

ADVANTAGE - Facilitates concurrent management of both the systems. Enables PDM system to recognize the latest processing condition of CAD system and content of each CAD data.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of CAD-PDM cooperation system.

CHOSEN-DRAWING: Dwg.1/7

TITLE-TERMS: CAD PDM COOPERATE SYSTEM CAD DATA REGISTER UNIT STORAGE DATA
FORMAT CAD DATA PDM SYSTEM

DERWENT-CLASS: T01

EPI-CODES: T01-J07B; T01-J15X;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N2000-266068

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USPT,JPAB,EPAB,DWPI,TDBD	17 same 19	55	<u>L10</u>
USPT,JPAB,EPAB,DWPI,TDBD	network	421455	<u>L9</u>
USPT,JPAB,EPAB,DWPI,TDBD	12 and 17	0	<u>L8</u>
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USPT,JPAB,EPAB,DWPI,TDBD	rfp	406	<u>L6</u>
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USPT,JPAB,EPAB,DWPI,TDBD	cad	15195	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	pdm	2113	<u>L2</u>
USPT,JPAB,EPAB,DWPI,TDBD	nicecad	0	<u>L1</u>

L1	0 S NICE
L2	39212 S RFP OR REQUEST FOR PROPOSAL
L3	19770 S CAD (P) NETWORK
L4	33 S L2 AND L3
L5	17546 S PDM
L6	2 S L5 AND L4

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110 and 111

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USPT,JPAB,EPAB,DWPI,TDBD	110 and 111	11	L12
USPT,JPAB,EPAB,DWPI,TDBD	collaborat\$3	6351	L11
USPT,JPAB,EPAB,DWPI,TDBD	19 and 12	177	L10
USPT,JPAB,EPAB,DWPI,TDBD	13 same 14	28329	L9
USPT,JPAB,EPAB,DWPI,TDBD	17 and 13	2	L8
USPT,JPAB,EPAB,DWPI,TDBD	11 same 12	6	L7
USPT,JPAB,EPAB,DWPI,TDBD	11 sme 12	20163	L6
USPT,JPAB,EPAB,DWPI,TDBD	11 same 12 same 13 same 14	0	L5
USPT,JPAB,EPAB,DWPI,TDBD	rfp or (request for proposal)	255131	L4
USPT,JPAB,EPAB,DWPI,TDBD	network	421455	L3
USPT,JPAB,EPAB,DWPI,TDBD	CAD	15195	L2
DWPI,USPT,EPAB,JPAB,TDBD	PDM	2113	L1

WEST

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Search Results - Record(s) 1 through 10 of 11 returned.

L12

☐ 1. Document ID: US 6063128 A

L12: Entry 1 of 11

File: USPT

May 16, 2000

US-PAT-NO: 6063128

DOCUMENT-IDENTIFIER: US 6063128 A

TITLE: Object-oriented computerized modeling system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6061440 A

L12: Entry 2 of 11

File: USPT

May 9, 2000

US-PAT-NO: 6061440

DOCUMENT-IDENTIFIER: US 6061440 A

TITLE: Intelligent switching system for voice and data

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 3. Document ID: US 6035297 A

L12: Entry 3 of 11

File: USPT

Mar 7, 2000

US-PAT-NO: 6035297

DOCUMENT-IDENTIFIER: US 6035297 A

TITLE: Data management system for concurrent engineering

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 4. Document ID: US 5987242 A

L12: Entry 4 of 11

File: USPT

Nov 16, 1999

US-PAT-NO: 5987242

DOCUMENT-IDENTIFIER: US 5987242 A

TITLE: Object-oriented computerized modeling system

Bentley
11/97

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 5. Document ID: US 5940082 A

L12: Entry 5 of 11

File: USPT

Aug 17, 1999

US-PAT-NO: 5940082

DOCUMENT-IDENTIFIER: US 5940082 A

TITLE: System and method for distributed collaborative drawing

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 6. Document ID: US 5887170 A

L12: Entry 6 of 11

File: USPT

Mar 23, 1999

US-PAT-NO: 5887170

DOCUMENT-IDENTIFIER: US 5887170 A

TITLE: System for classifying and sending selective requests to different participants of a collaborative application thereby allowing concurrent execution of collaborative and non-collaborative applications

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 7. Document ID: US 5844979 A

L12: Entry 7 of 11

File: USPT

Dec 1, 1998

US-PAT-NO: 5844979

DOCUMENT-IDENTIFIER: US 5844979 A

TITLE: Intelligent switching system for voice and data

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 8. Document ID: US 5815415 A

L12: Entry 8 of 11

File: USPT

Sep 29, 1998

US-PAT-NO: 5815415

DOCUMENT-IDENTIFIER: US 5815415 A

TITLE: Computer system for portable persistent modeling

*Bentley
3/96*

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 9. Document ID: US 5724508 A

L12: Entry 9 of 11

File: USPT

Mar 3, 1998

US-PAT-NO: 5724508

DOCUMENT-IDENTIFIER: US 5724508 A

TITLE: Apparatus for collaborative computing*"could include
other"*

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 10. Document ID: US 5701400 A

L12: Entry 10 of 11

File: USPT

Dec 23, 1997

US-PAT-NO: 5701400

DOCUMENT-IDENTIFIER: US 5701400 A

TITLE: Method and apparatus for applying if-then-else rules to data sets in a relational data base and generating from the results of application of said rules a database of diagnostics linked to said data sets to aid executive analysis of financial data

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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Terms	Documents
110 and 111	11

Documents, starting with Document:

Display Format:

WEST[Generate Collection](#)**Search Results - Record(s) 11 through 11 of 11 returned.**☒ 11. Document ID: US 5293619 A

L12: Entry 11 of 11

File: USPT

Mar 8, 1994

US-PAT-NO: 5293619

DOCUMENT-IDENTIFIER: US 5293619 A

TITLE: Method and apparatus for collaborative use of application program

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	HWMC	Draw Desc	Image
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Terms	Documents
110 and 111	11

[Display](#)

Documents, starting with Document:

Display Format:[Change Format](#)

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Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 6139833 A

L7: Entry 1 of 6

File: USPT

Oct 31, 2000

US-PAT-NO: 6139833

DOCUMENT-IDENTIFIER: US 6139833 A

TITLE: Targeted gene discovery

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6039897 A

L7: Entry 2 of 6

File: USPT

Mar 21, 2000

US-PAT-NO: 6039897

DOCUMENT-IDENTIFIER: US 6039897 A

TITLE: Multiple patterned structures on a single substrate fabricated by elastomeric micro-molding techniques

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 5272641 A

L7: Entry 3 of 6

File: USPT

Dec 21, 1993

US-PAT-NO: 5272641

DOCUMENT-IDENTIFIER: US 5272641 A

TITLE: Parts insertion machine control system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 4. Document ID: JP 2000113007 A

L7: Entry 4 of 6

File: JPAB

Apr 21, 2000

PUB-NO: JP02000113007A

DOCUMENT-IDENTIFIER: JP 2000113007 A

TITLE: SYSTEM AND METHOD FOR LINKING CAD/PDM AND COMPUTER- READABLE RECORDING MEDIUM RECORDING CAD/PDM LINKING PROGRAM

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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L7: Entry 5 of 6

File: JPAB

Jul 13, 1999

PUB-NO: JP411191095A
DOCUMENT-IDENTIFIER: JP 11191095 A
TITLE: INTEGRATED CAE SYSTEM

PUBN-DATE: July 13, 1999

INVENTOR-INFORMATION:

NAME

SHIYOUI, SHINICHI
YAGAWA, MOTOKI
YOSHIMURA, SHINOBU
AKIBA, HIROSHI

COUNTRY

N/A
N/A
N/A
N/A

ASSIGNEE-INFORMATION:

NAME

ALLIED ENGINEERING:KK

COUNTRY

N/A

APPL-NO: JP09370199

APPL-DATE: December 25, 1997

INT-CL (IPC): G06F 15/16

ABSTRACT:

PROBLEM TO BE SOLVED: To enable integration of CAD and CAM and expansion to PDM (product data management) by making abstract CAE (computer-aided engineering) system software concepts in decentralized environment and making a communication between subsystems by message passing using TCP/IP as the standard protocol of a communication between computers.

SOLUTION: The whole system including a CAD and a CAM system is generally named 'universe' and the CAD and CAE systems in it are named 'one galactic system'. Galactic systems A to D consists of several 'galaxys' (1) to (4). Communication in and between the galaxys and between the galactic systems are performed by the message passing of TCP/IP sockets.

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